

AMENDMENTS TO THE CLAIMS:

Please cancel Claims 11-37 without prejudice or disclaimer of the subject matter presented therein.

Please amend Claims 1-3, 5, and 7-10, and add new Claims 38 and 39, as follows. In accordance with the revised amendment format, all claims are presented below.

Sub C

D

1

13 cont

1. (Currently Amended) An image pickup apparatus comprising:
a plurality of pixels; and
a color filter array of four colors disposed on said plurality of pixels,
wherein said color filter array has a periodicity of two rows x two
columns, and

wherein colors of ~~four~~ color filters in a periodical unit of two rows x
two columns are all different from each other and have fixed positions.

2. (Currently Amended) An image pickup apparatus according to claim 1, wherein the ~~four~~ color filters in the periodical unit include a filter of for transmitting only green light in a visible light range, a filter of for intercepting only blue color in the visible light range, a filter of for intercepting only green light in the visible light range, and a filter of for intercepting only red light in the visible light range.

3. (Currently Amended) An image pickup apparatus according to claim 1, further comprising means for performing a first operation unit which performs an operation of $A + B - C - D$, where A, B, C, and D represent signals picked up from an area of two rows x two columns.

4. (Original) An image pickup apparatus according to claim 3, wherein the signals A and B are disposed on a same line or on a same column, and the signals C and D are disposed on a same line or on a same column.

5. (Currently Amended) An image pickup apparatus according to claim 3, further comprising means for performing a second operation unit which performs an operation of A + C - B - D.

6. (Original) An image pickup apparatus according to claim 5, wherein the signals A and B are disposed on a same line or on a same column, and the signals C and D are disposed on a same line or on a same column.

7. (Currently Amended) An image pickup apparatus according to claim 1, further comprising:

means for reading a first read-out unit which reads out a difference between: (a) an addition signal of a first row, first column signal and a first row, second column signal, and (b) an addition signal of a second row, first column signal and a second row, second column signal, respectively in an area of two rows x two columns column, and

means for reading a second read-out unit which reads out a difference between: (a) an addition signal of a first row, first column signal and a second row, first column signal, and (b) an addition signal of a first row, second column signal and a second row, second column signal, respectively in the area of two rows x two columns column.

8. (Currently Amended) An image pickup apparatus according to claim 7, wherein the areas of two rows x two columns are disposed without any space therebetween.

9. (Currently Amended) An image pickup apparatus according to claim 1, further comprising means for reading a read-out unit that reads out an addition signal of all signals in an area of four rows x one column.

10. (Currently Amended) An image pickup apparatus according to claim 1, further comprising means for reading a read-out unit that reads out an addition signal of all signals in an area of one row x four columns.

11 - 37 (Cancelled)

38. (New) A color filter array having a periodicity of two rows x two columns, wherein colors of color filters in a periodical unit of two rows x two columns are all different from each other and have fixed positions.

39. (New) A color filter array according to claim 38, wherein the color filters in the periodical unit include a filter for transmitting only green light in a visible light range, a filter for intercepting only blue color in the visible light range, a filter for intercepting only green light in the visible light range, and a filter for intercepting only red light in the visible light range.